HEALTHCARE IN KENTUCKY:

The Cabinet for Health and Family Services Biennial Report on Health Care Transparency

July 1, 2011 – June 30, 2013

Cabinet for Health and Family Services
Office of Health Policy
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Executive Summary

KRS 216.2929 requires "The Cabinet shall at least biennially, no later than October 1 of each odd-numbered year, report on matters pertaining to comparative health-care charges, quality, and outcomes, the effectiveness of its activities relating to educating consumers and containing health-care costs, and recommendations regarding its data collection and dissemination activities." The Office of Health Policy (OHP) within the Cabinet for Health and Family Services (CHFS) has been charged with ensuring compliance with KRS 216.2920 to 216.2929. This report is submitted in compliance with this requirement.

Health Care Information Center (the "Transparency" Web Site)

KRS 216.2923 requires the cabinet to publish and make available information on charges for health care services and the quality and outcomes of health care services. KRS 216.2929 also requires CHFS to make available on its Web site information on charges for health care services at least annually in understandable language with sufficient explanation to allow consumers to draw meaningful comparisons between every hospital and ambulatory facility, differentiated by payor if relevant, and for other provider groups as relevant data becomes available.

In response to these requirements, a Web site was developed by the Office of Health Policy which may be accessed at http://chfs.ky.gov/ohp/healthdata/ . The Web site includes the software, MONARHQ, which creates comprehensive Web pages to display information related to Inpatient Quality Indicators, Prevention Quality Indicators, Patient Safety Indicators, and Pediatric Quality Indicators, as well as utilization of health services by hospital or by a county by Major Diagnostic Category (MDC), Medicare Severity Diagnosis Related Group (DRG), Condition, or by Procedure. Because this software displays the results in standardized user friendly Web pages, consumers may view results from any state utilizing MONAHRQ, and the results will be displayed in a visually similar manner. Kentucky is the fourth state to implement this new technology. Data is displayed for calendar years 2009, 2010, and 2011.

Charges for Health Care Services

With the implementation of MONAHRQ, median charges are now available for each hospital, and for all hospitals within an Area Development District, or statewide by Major Diagnostic Category (MDC), Medicare Severity - Diagnosis Related Group (DRG), Condition, or by Procedure for calendar years 2009, 2010, or 2011. The OHP web site also includes a link to hospital charge information provided by the Kentucky Hospital Association. Data is provided based on Medicare Severity-Diagnosis Related Group (MS-DRG) for years 2006, 2007, 2008, 2009, 2010, and 2011. Results are displayed by hospital and provide the number of discharges, median charges, 10^{th} percentile charges, 90^{th} percentile charges, average length of stay, and average age of the patient. Hospitals with less than 20 discharges for the specified MS-DRG are excluded as the sample size is considered too small to represent statistically reliable results.

Quality and Outcomes of Health Care Services

The OHP uses MONAHRQ software to display information about quality and outcomes. A link to the U.S. Department for Health and Human Services' Hospital Compare Web site is also on the OHP Web page.

"Hospital Compare" was created through the efforts of the Centers for Medicare and Medicaid Services (CMS) along with members of the Hospital Quality Alliance. The Web site provides a tool to compare hospitals' care for patients with certain medical conditions or surgical procedures, and summary results based on surveys completed by patients about their experiences during a recent hospital stay. The information on the web site comes from hospitals that have agreed to submit quality information to CMS.

A search may be conducted by hospital name within a certain distance of a zip code, or by city, state, or county. After entering search criteria, information about medical conditions includes: heart attack, heart failure, chronic lung disease, pneumonia, diabetes in adults, and chest pain. Information about surgical procedures, including heart and blood vessels, abdominal, bladder, kidney, and prostate, female reproductive, and neck, back, and extremities is also available.

The results of a search will display the following:

- General information about the hospital such as name, address, telephone number, type of hospital, and if emergency services are provided;
- Process of care measures – examples include items such as percent of heart attack patients given aspirin at arrival, percent of pneumonia patients given oxygenation assessment, percent of heart failure patients given smoking cessation advice or counseling;
- Outcome of care measures – an example is Death Rate of Heart Attack Patients;
- Survey of patients' hospital experiences – examples include percent of patients who reported that their nurses "always" communicated well, percent of patients who reported that their pain was "always" well controlled, or percent of patients who reported that their room and bathroom were "always" clean;
- Average Medicare payment to the hospital for the specified diagnosis related group (DRG); and,
- Number of Medicare patients treated.

MONAHRQ displays data in four areas: hospital quality ratings, hospital utilization, maps of avoidable hospital stays, and county rates of hospital use. The data used to develop these reports are standardized administrative information routinely submitted by Kentucky hospitals to bill for services. To fairly report on the quality of inpatient care, the data are risk-adjusted to account for differences in patient acuity or severity levels for each facility. Data is displayed for calendar years 2009, 2010, and 2011.

"Hospital Quality Ratings" are displayed as ratings for the public or as detailed quality statistics and contain quality ratings related to the following topics:

- Newborns with a birth injury or infection
- Obstetric injury after a vaginal delivery without medical instruments
- Obstetric injury after vaginal deliver with medical instruments
- Percentage of births (deliveries) that are C-sections
- Uncomplicated vaginal births performed after C-section
- First birth deliveries performed as C-section
- Vaginal birth after a previous C-section
- Dying in the hospital during or after having a surgery to bypass a blocked blood vessel in the heart
- Number of surgeries to bypass blocked blood vessels in the heart
- Dying in the hospital during or after a procedure to open up blocked vessels in the heart (angioplasty)
- Number of procedures to open up blocked vessels in the heart (angioplasty)
- Number of times a procedure is used to find blocked blood vessels in the heart on both sides of the heart instead of on only one side of the heart which is known to lead to fewer complications
- Dying in the hospital after heart attack
- Dying in the hospital after heart failure
- Dying in the hospital during or after surgery on the esophagus
- Number of surgeries to remove part of the esophagus
- Dying in the hospital during or after pancreas surgery
- Number of surgeries to remove part of the pancreas
- Dying in the hospital during or after a surgical repair of an aortic aneurysm
- Number of surgical repairs of an aortic aneurysm
- Dying in the hospital during or after brain surgery
- Dying in the hospital during or after hip replacement
- Dying in the hospital after stroke
- Dying in the hospital during or after a procedure to open up a blocked blood vessel leading to the brain
- Number of operations to remove blockage in brain arteries
- Dying in the hospital while getting care for pneumonia
- Dying in the hospital after bleeding from stomach or intestines
- Dying in the hospital after fractured hip
- Dying in the hospital while getting care for a condition that rarely results in death
- Dying in the hospital because a serious condition was not identified and treated
- Hip fracture after surgery
- Bleeding or bruising after surgery
- Abnormal changes in internal body functions after surgery
- Breathing failure after surgery
- Blood clot in the lung or leg vein after surgery
- Severe bloodstream infection after surgery
- Surgical wound splits open surgery on stomach or pelvis
- Developing a bed sore in the hospital

- Surgical tool accidently left in the body during surgery
- Accidental puncture of the lung
- Blood infection that patients with catheters developed while in the hospital
- Accidental cut or tear
- Blood transfusion reaction
- Health appendix removed in the elderly
- Gallbladder was removed using a minimally-invasive procedure

Reports and tables may be produced for one hospital or multiple hospitals. Hospitals may be selected from a master list, within an Area Development District, or within a specified distance from a zip code. Each report will be accompanied by the number of procedures performed or by a visual indicator to identify if, compared to other hospitals the facility is better than average, about the same or average, worse than average, or that there is insufficient data to rate the hospital for that specific topic. Values based on five or fewer discharges are suppressed to protect confidentiality of patients and will have a visual indicator indicating insufficient data to rate the hospital. The comparison/rating may be made to all hospitals in Kentucky or to the national average for that indicator. The report may be sorted by hospital name or by the hospital ratings. Each report contains a link to information about how quality may be improved as well as how to interpret the table/report.

Additional data will be added annually when it becomes available.

"Hospital Utilization" displays the utilization of hospitals by Major Diagnostic Category (MDC), Medicare Severity – Diagnosis Related Group (DRG), condition, or procedure. The report may be generated for a single hospital, all hospitals in the state, or all hospitals within an Area Development District. There is a search feature that allows the individual to identify hospitals located within a specified distance from a zip code.

Utilization by MDC or DRG reports display the number of discharges, median charges in dollars, and median length of stay in days for the United States, Southern States, as well as demographic information such as age group, gender, primary payer, and race. Utilization by Condition reports display the number of discharges in which the condition was included in any diagnosis code, the number of discharges in which the condition was included as the primary diagnosis code, the median charges in dollars, and the median length of stay in days for the United States, Southern States, as well as demographic information such as age group, gender, primary payor, and race. Utilization by Procedure reports display the number of discharges in which the procedure was included in any procedure code, the number of discharges in which the procedure was included as the first procedure code, the median charges in dollars, and the median length of stay in days for the United States, Southern States, as well as demographic information such as age group, gender, primary payor, and race.

"Maps of Avoidable Stays" map and compare Kentucky counties by rates of potentially avoidable hospital stays. The maps show the number of hospital stays in each county for every 100,000 residents, except for low birth rate and perforated appendix which show the number of hospital stays in each county for every 100 residents. Darker colors represent higher rates, and lighter colors represent lower rates. Map colors are assigned based on quintiles and when not

enough data exists to report a value, the map color is grey. Maps are grouped by conditions or areas of interest and available for the following:

- Chronic Lung Conditions
  - Adult asthma admission rate
  - Chronic obstructive pulmonary disease admission rate
- Diabetes
  - Uncontrolled diabetes admission rate
  - Diabetes short-term complication admission rate
  - Diabetes long-term complication admission rate
  - Rate of lower – extremity amputation among patients with diabetes
- Heart Conditions
  - Hypertension admission rate
  - Congestive heart failure admission rate
  - Angina admission without procedure
- Other Conditions
  - Perforated appendix admission rate
  - Dehydration admission rate
  - Bacterial pneumonia admission rate
  - Urinary tract infection admission rate
  - Low birth weight rate
- Composites from above to include Overall, Chronic conditions, and Acute conditions
- Patient Safety
  - Foreign body left in during procedure
  - Iatrogenic pneumothorax
  - Hospital acquired vascular catheter related infections
  - Post-operative wound dehiscence
  - Accidental puncture or laceration
  - Transfusion reaction
  - Post-operative hemorrhage or hematoma
- Procedure Rates
  - Coronary artery bypass graft rate
  - Percutaneous transluminal coronary angioplasty rate
  - Hysterectomy rate
  - Laminectomy rate

"County Rates" displays the utilization of hospitals by Major Diagnostic Category (MDC), Medicare Severity – Diagnosis Related Group (DRG), condition, or procedure based on the residence of the patient. The report may be generated for a single county or for all counties combined. When utilizing the "all counties combined" feature, a statewide map of rates per 1,000 people is also available. The maps show the number of hospital stays in each county for every 1,000 county residents. Darker colors represent higher rates, and lighter colors represent lower rates. Map colors are assigned based on quintiles and when not enough data exists to report a value, the map color is grey.

Utilization by MDC or DRG reports display the number of discharges and rate of discharges per 1,000 persons for the United States, Southern States, as well as demographic

information such as age group, gender, and race. Utilization by Condition reports display the number of discharges in which the condition was included in any diagnosis code, the number of discharges in which the condition was included as the primary diagnosis code, rate of discharges per 1,000 persons in which the condition was included in any diagnosis code, and the rate of discharges per 1,000 persons in which the condition was included as the principal diagnosis for the United States, Southern States, as well as demographic information such as age group, gender, and race. Utilization by Procedure reports display the number of discharges where the procedure was included in any procedure code, the number of discharges in which the procedure was included as the first procedure code, the rate of discharges per 1,000 persons in which the procedure was included in any procedure code, and the rate of discharges per 1,000 persons in which the procedure was included as the first procedure code for the United States, Southern States, as well as demographic information such as age group, gender, and race.

Prevention Quality Indicators (PQIs) as Compared to National Rates

PQIs are a set of measures that can be used to identify "ambulatory care sensitive conditions," for which good outpatient care can potentially prevent the need for hospitalization, complications, or more severe disease. MONAHRQ includes PQIs as part of "Maps of Avoidable stays" in which quintiles with higher rates are displayed in darker colors and lower rates are displayed in lighter colors. While this provides insight into the counties with higher incidences within the state, it does not provide an indication of how Kentucky counties compare to a national average. Therefore, OHP has also included on its web site information specific to PQIs as compared to the national rates. Results for each PQI are displayed on a Kentucky map with each county colored in red, yellow, or green. Green indicates an area with a risk-adjusted rate (considering a margin of error) that is lower than the national average for that indicator; yellow indicates an area with a risk-adjusted rate comparable to the national average; and red indicates an area with a risk-adjusted rate above the national average. When there are no discharges meeting the criteria, the map color is white. For PQIs, lower rates usually represent better outpatient care which may prevent the need for hospitalization.

Effectiveness of consumer education activities and containing health-care costs

The OHP web site provides a wealth of health care information related to charges, services, and quality, and MONAHRQ continues to provide an invaluable amount of useful information. This information is used by hospitals, consumers, researchers, health departments, other state agencies, and policy makers as an effective means of education and decision making that can help contain health-care costs. Consumers may use the Inpatient Quality Indicators to help determine the outcomes for specific providers and to determine the costs for specific diagnoses. Policy makers and health departments use the Prevention Quality Indicators in their research and decision making.

Recommendations Regarding Data Collection

The OHP recommends one change to the Commonwealth's present data collection process. Currently, the statute prohibits the collection of data that would allow a computer program to create a unique Patient Identifier, allowing us to follow a patient across multiple hospital stays, without disclosing individually identifying information regarding patients:

- Current method – County A had 437 emergency department (ED) **visits** for uncontrolled diabetes and County B had 356 ED **visits** for uncontrolled diabetes. This would presume that County A has a higher number of residents with uncontrolled diabetes. However, without a patient identifier this conclusion may not be accurate because only the number of emergency department **visits** is known, and there is a likelihood of duplication in the number of ED visits.
- Proposed method – Using a patient identifier, we may learn that County A's 437 ED **visits** for uncontrolled diabetes were made by 232 individual patients, some visiting the ED only once and some visiting the ED multiple times. We may also discover that County B's 356 ED visits for uncontrolled diabetes were made by 287 individual patients, some visiting the ED only once and some visiting the ED multiple times.

This new methodology would indicate that County B has more individuals visiting the emergency department with uncontrolled diabetes. It would also reveal that, although there are fewer patients in County A, those patients are visiting the ED more often with uncontrolled diabetes than in the comparison county.

Unique patient identifiers would also be extremely useful in tracking hospital re-admissions to analyze the reasons patients were re-admitted to the hospital which currently is not possible. OHP would not identify the patient, but would utilize a unique identifier to track the services received by patients.

Other Information available on the Office of Health Policy web site

A link to the federal government's internet home for information and resources related to health care transparency and value-driven health care is also provided. See: http://archive.hhs.gov/valuedriven/ .